

Curriculum Vitae

BARRY L. BERMAN

Columbian Professor
Department of Physics
The George Washington University, Washington, D.C. 20052
(202) 994-7192; berman@gwu.edu

- Education:** University of Illinois, Urbana, IL M.S. 1959, Ph.D. 1963
Harvard University, Cambridge, MA B.A. 1957
- Positions:** Professor, Department of Physics, The George Washington University,
Washington, DC (1985-present; Chairman 1993-1998; Columbian School
of Arts and Sciences Distinguished Professor 1998-present)
Physicist, E Division, Lawrence Livermore National Laboratory,
University of California, Livermore, CA (1963-85)
Lecturer, Department of Applied Science, University of California at Davis,
Livermore, CA (1969-85)
Research in space nuclear propulsion, Douglas Aircraft Co.,
Culver City, CA (summer 1961)
Research in crystal defects, University of Illinois,
Urbana, IL (summer 1959)
Research in electron optics, Rauland Corp.,
Chicago, IL (summer 1958)
Research in inertial guidance, Minneapolis-Honeywell Aero Division,
Minneapolis, MN (summer 1957)
Research in acoustics, Allis-Chalmers Co.,
West Allis, WI (summer 1956)
- Visiting Positions:** Visiting Scientist, Thomas Jefferson National Accelerator Facility,
Newport News, VA (1999, 2000)
Guest Scientist, Los Alamos National Laboratory,
Los Alamos, NM (1985, 1988, 1989, 1991, 1992)
Staff Physicist, Continuous Electron Beam Accelerator Facility,
Newport News, VA (1991-92)
Guest Scientist, Lawrence Berkeley Laboratory,
Berkeley, CA (1986)
Visiting Professor, Massachusetts Institute of Technology,
Cambridge, MA (1982)
Visiting Scientist, Centre d'Etudes Nucléaires de Saclay,
Saclay, France (1980-81)
Sir Thomas Lyle Fellow, University of Melbourne,
Melbourne, Australia (1978)
Visiting Professor, University of São Paulo,
São Paulo, Brazil (1977)
Visiting Professor, University of Toronto,
Toronto, Ontario, Canada (1970, 1975)
Guest Professor, Institut für Theoretische Physik, University of Frankfurt,
Frankfurt, Germany (1974)
Visiting Associate Professor, Yale University,
New Haven, CT (1969-70)

Member: American Physical Society (Fellow, 1972-); APS Divisions: Nuclear Physics (Program Committee, 1972-73, Fellowship Committee, 1986-88; Chairman, 1987-88); Electron and Atomic Physics, 1978-91; Astrophysics, 1989-91; APS Forums: Physics and Society; International Physics, Education; APS Topical Groups: Few Body Systems and Multiparticle Dynamics (Program Committee, 1987-89, Executive Committee, 1992-94); Materials Physics, 1987-91; US Nuclear Data Committee: Subcommittee on Photonuclear Reactions, 1973; Subcommittee on Basic Science, 1973-75; International Advisory Committee, International Conference on Nuclear Interactions (Canberra, 1978); International Advisory Board, Conference on Electromagnetic Aspects of Nuclear Structure (Mainz, 1979); Local Committee and Program Committee, International Conference on Nuclear Physics (Berkeley, 1980); DOE Panel for the Review of Nuclear Physics Research at the Brookhaven High Flux Beam Reactor, 1983; NSERC (Canada) Committee to Evaluate the Montreal Accelerator, 1984; CEBAF Positron Working Group, 1984-85 (Chair/Co-chair); Organizing Committee, National Summer School in Nuclear Physics (Georgetown), 1985-87; Organizing Committee, NATO Advanced Research Workshop on Relativistic Particle Channeling (Maratea, Italy, 1986); Society for Literature and Science (Charter Member); International Advisory Committee, European Workshop on Few Body Physics (Rome, 1986); National/International Advisory Committee, HUGS AT CEBAF Summer School (Newport News), 1987-95; Organizing Committee, CEBAF Workshop on Photon Tagging, 1988; SURA Impact Review Committee, 1989; Board of Directors, CEBAF Users' Group, 1989-91; Chairman, CLAS Real Photon Physics Working Group, 1991-93; Member, CLAS Coordinating Committee, 1991-93; Chairman, CEBAF Users' Group Nominating Committee, 1994; International Program Committee, International Symposia on Radiation of Relativistic Electrons in Periodical Structures (Tomsk, Russia, 1995 and 1997); CLAS Membership Committee, 1999-; DOE Panel for the Review of the HIGS Facility at TUNL, 2000; Scientific Advisory Committee, VII Workshop of Nuclear Physics (Havana, Cuba, 2001); CLAS Service Committee, 2001- (Chair).

Honors: Fellow, American Physical Society, since 1970
Fellow, Branford College, Yale University, 1969-70
Sir Thomas Lyle Fellow, 1978
Citations, President of the University of California, 1979 and 1980
Citations, Scientific Advisory Committee on the Lawrence Livermore National Laboratory, 1977 and 1980
Citations, Director of the Lawrence Livermore National Laboratory (several)
Distinguished Faculty Award for Excellence in Scholarship,
The George Washington University, 1988
Award for the Experimental Proof of Channeling Radiation
The Catholic University of America, 1990
Columbian School of Arts and Sciences Distinguished Professorship,
The George Washington University, 1998

Listings:

American Men and Women of Science
Who's Who in Science
Who's Who in Technology
Who's Who in Science and Technology
Who's Who in Science and Engineering
Who's Who in the West
Who's Who in the East
Who's Who in the World
Men of Achievement
International Who's Who of Contemporary Achievement
International Who's Who of Professionals
International Directory of Distinguished Leadership
Dictionary of International Biography
International Man of the Year, 1992/93

**Research
Grants:**

Department of Energy, Division of Basic Energy Sciences,
for channeling radiation, 1977-83
Department of Energy, Division of Nuclear Physics,
for electron and proton scattering from nuclei, 1978-85
George Washington University Committee on Research,
for transition radiation, 1985-86
George Washington University Committee on Research,
for medium-energy nuclear physics, 1985-86
George Washington University Committee on Research,
for photonuclear reactions, 1985-86 and 1986-87
Department of Energy, Division of Nuclear Physics,
for medium-energy nuclear physics, 1986-2003
Department of Energy, Division of Nuclear Physics,
for a coherent-bremsstrahlung facility at TJNAF, 1997-2000
Department of Energy, University Research Instrumentation Program,
for a wire-chamber-based nuclear detector facility, 1989-94
(co-principal investigator)
National Science Foundation, Major Research Instrumentation Program,
for a polarized-photon facility at TJNAF, 1997-2001
(co-principal investigator)

**Conference
Grants:**

International Union of Pure and Applied Physics, Department of Energy,
National Science Foundation, Army Research Office, and Office of Naval
Research,
for the International Conference on Photonuclear Reactions and
Applications, 1973 (Asilomar, CA)
National Science Foundation,
for the International Symposium on the Three-Body Force in the
Three-Nucleon System, 1986 (Washington, DC)

Dissertations Directed:	The Photodisintegration of ^3H and ^3He David Duane Faul University of California, 1980
	Electromagnetic Dissociation of Relativistic Heavy Ions Douglas Lenard Olson University of California, 1982
	Atomic Force Microscopy Investigation of Electron- and Neutron-Induced DNA Double Strand Breaks Dalong Pang The George Washington University, 1998
	Photofission of Actinide and Preactinide Nuclei in the Quasideuteron and Δ -Resonance Energy Regions Juan Carlos Sanabria The George Washington University, 1998
	Photofission of Heavy Nuclei from 0.2 to 3.8 GeV Catalina Cetina The George Washington University, 2001
Referee:	Physical Review, Physical Review Letters, Nuclear Physics, Physics Letters, Reviews of Modern Physics, Earth and Planetary Science Letters, Nuclear Science and Engineering, Australian Journal of Physics, Astrophysical Journal, Astrophysical Letters, Nuclear Instruments and Methods, Applied Physics Letters, Atomic Collisions in Solids, Foundations of Physics, Physics Essays, Health Physics, Journal of Physics, Nuclear Technology, International Journal of Modern Physics, Fizika
Consultant:	Los Alamos National Laboratory, Lawrence Livermore National Laboratory, Sandia National Laboratories, General Atomic, Spectron/Titan Industries, SFA Incorporated, Planning Systems Incorporated, Cerebellum Corporation, Hago Company, Saunders Publishing, Brooks-Cole Publishing, World Bank, National Geographic Society
Reviewer:	US Atomic Energy Commission/Energy Research and Development Administration/Department of Energy, National Science Foundation, US Army Research Office, Research Corporation, National Academy of Sciences--National Research Council, Air Force Office of Scientific Research, Rand Corporation, National Research Council of Canada/National Science and Engineering Council/Natural Sciences and Engineering Research Council of Canada, Dutch Ministry of Education and Science, Australian Research Council, City University of New York, University of Toronto, University of Melbourne, Lawrence Berkeley Laboratory, Soros Foundation, Civilian Research and Development Foundation, International Science and Technology Center

Session Chairman:	<p>APS Washington Meeting, 1973; Gordon Conference on Photonuclear Reactions, 1974; Gordon Conference on Photonuclear Reactions, 1976; International School on Intermediate Energy Nuclear Physics, 1981; Workshop on Microscopic Approaches to Nucleon-Nucleus Scattering, 1983; CEBAF Summer Workshop, 1984; Gordon Conference on Photonuclear Reactions, 1984; CEBAF Summer Workshop, 1985; European Workshop on Few-Body Physics, 1986; Short Course on Nuclear Arms Race Technologies: The 1990s, 1988; Gordon Conference on Photonuclear Reactions, 1990; International Workshop on Dynamical Aspects of Nuclear Fission, 1991; Workshop on Giant Resonances and Related Phenomena, 1991; First International Symposium on Explosive Detection Technology, 1991; CLAS Real-Photon Physics Working Group Meetings, 1992 (2), 1993; APS Washington Meeting, 1992; LAMPF/WNR (n,p) Collaboration Meeting, 1992; HARP Collaboration Meeting, 1992; CLAS Collaboration Meeting, 1993; International Symposium on Radiation from Relativistic Electrons in Periodic Structures, 1993; International Conference on Mesons and Light Nuclei, 1995; George Gamow Symposium, 1996; APS Washington Meeting, 1997; APS DNP Fall Meeting, 1997 (2); International Workshop on the Excited States of the Nucleon, 1997; Special Workshop on Hadron Physics in the 21st Century, 1998; International Conference on Few-Body Problems in Physics, 2000; APS Washington Meeting, 2001</p>
Chairman and Editor:	<p>International Conference on Photonuclear Reactions and Applications, 1973 (two volumes, 1392 pages)</p> <p>International Symposium on the Three-Body Force in the Three-Nucleon System, 1986 (one volume, 530 pages)</p>
Current Research Interests:	<p>Medium- and high-energy nuclear physics, including photonuclear reactions and electron, proton, and pion scattering, especially on few-body nuclei; other areas of nuclear physics, including neutron-induced reactions, nuclear fission, nuclear resonance fluorescence, relativistic heavy-ion reactions, and nuclear astrophysics; atomic and solid-state collision and coherent-radiation phenomena, including channeling radiation, transition radiation, and coherent bremsstrahlung; applications of nuclear, atomic, and radiation physics to problems in lunar geology, radiation shielding, medical diagnostics and therapy, radiobiology, materials characterization, and substance identification</p>

**University
Service:**

University Committees:

Fulbright Awards, 1986
Sponsored Research, 1987-88; 1990-91
Faculty Senate--Research, 1988-89; 1990-91 (Chairman); 1992-2001
Faculty Senate, 1990-91
Advisory Council on Research, 1990-91; 1993-6
Administrative Committee on Research, 1990-91
Administrative Committee on Research on Humans, 1990-91
University Committee on Research, 1993
Grants Administration Committee, 1998
Science/Math/Engineering Open House Committee, 1998

Columbian School of Arts and Sciences Committees:

Junior Scholars Incentive Program, 1985-86; 1988-89 (Chairman)
Scholarly and Creative Awards, 1986-87
Academic Program Review--Mathematics, 1989-90
Personnel, 1990
Academic Program Review--Environmental Studies, 1991 (Chairman)
Promotion--Speech & Hearing, 1998
Post-Tenure Review, 1998
Academic Program Review—Political Science, 2000
Columbian Professorship, 2001

Physics Department Committees:

Faculty Search (Experimentalists), 1986-89, 1992; 1995-2001 (Chair)
Colloquia, 1985-90 (Chairman); 1992-93; 2000-01
Space/Facilities, 1985-87; 1990-91; 1995-96
Planning, 1985-88; 1990-91; 1992-93; 1993-98 (Chairman); 2000-01
Undergraduate Program, 1985-89
Shop Operations, 1985-86; 1987-89; 1990-91
Nuclear Detector Laboratory, 1985-1986
Staff Search, 1985-86, 1996-8 (Chairman)
Visiting Faculty, 1986-87, 1997 (Chairman)
Faculty Search (Theorists), 1987-88, 1995
Social/Gift Fund, 1988
Fellowship Information Center Representative, 1988-89
Graduate Program, 1989-91; 1992-93 (Chairman)
Center for Nuclear Studies Executive Committee, 1990-2000
Bag-Lunch Seminars, 1992-93 (Chairman)

Organized:

Joint George Washington University--National Science Foundation
Colloquia, 1985-90

International Symposium on the Three-Body Force in the Three-
Nucleon System, 1986

CEBAF Large-Acceptance Spectrometer Workshops, 1987 and 1989;
Collaboration Meeting, 1993

American Physical Society Forum on Physics and Society--George
Washington University Short Course on Nuclear Arms Race
Technologies: The 1990s, 1988

GW Day at CEBAF, 1993 and 1995

Physics Department Retreats, 1998